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EXAMINER	
WANG, CHANG YU	

ART UNIT	PAPER NUMBER
1649	

DATE MAILED: 01/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/603,584	STRINGER, BRADLEY MICHAEL JOHN	
	Examiner	Art Unit	
	Chang-Yu Wang	1649	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 April 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Status of Application

1. Claims 1-23 are pending and under examination in this office action.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09454446, filed on Dec 6, 1999.

Information Disclosure Statement

3. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Specification

4. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

Content of Specification

(a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.

(b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.

(c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.

(d) The Names Of The Parties To A Joint Research Agreement: See 37 CFR 1.71(g).

(e) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.

(f) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:

(1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."

(2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are

solved by the applicant's invention. This item may also be titled "Background Art."

(g) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.

(h) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.

(i) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.

(j) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).

(k) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if

an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).

(l) Sequence Listing, See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

Claim Objections

5. Claims 6-18, 20-23 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in alternative only and/or cannot depend from any other multiple dependent claim. See MPEP § 608.01(n).

6. Claim 19 is objected to because of the following informalities: the typographical error of apoptosis. Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. Claim 1-17 and 18-23 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for immortalizing and differentiating Raphe neural precursor cells derived from ventromedial mesencephalon or medulla oblongata into

neural cells with positive immunostainings of serotoninergic (5-HT), neurofilament and neuron specific enolase *in vitro*, does not reasonably provide enablement for immortalizing and differentiating any types of neural precursor or neural precursor stem cells into any different types of neuronal populations,further regulating apoptosis and the use of the immortalized neural cell lines in the study of apoptosis as broadly claimed. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to use the invention commensurate in scope with these claims.

9. "There are many factors to be considered when determining whether there is sufficient evidence to support a determination that a disclosure does not satisfy the enablement requirement and whether any necessary experimentation is 'undue'. These factors include, but are not limited to:

(A) The breadth of the claims;

(B) The nature of the invention;

(C) The state of the prior art;

(D) The level of one of ordinary skill;

(E) The level of predictability in the art;

(F) The amount of direction provided by the inventor;

(G) The existence of working examples; and

(H) The quantity of experimentation needed to make or use the invention based on the content of the disclosure.

In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988)". See MPEP § 2164.01.

10. The claims are drawn to a method for producing large population of neural cells comprising immortalizing and differentiating neural stem/precursor cells into differentiated neural cells. The instant specification discloses that cells derived from ventromedial mesencephalon or medulla oblongata from embryonic day 12-13 (E12-13) can be immortalized by transformation with oncogene SV40T and differentiated under temperature control. Cells were able to proliferate under permissive temperature at 33°C, and under non-permissive temperature at 39°C, cells stopped proliferating and started differentiation into cells with serotonergic neuronal characteristics *in vitro*. However, with limited working examples, Applicant fails to teach whether these culture conditions can be applied to all types of neural precursor cells derived from all different regions of the central nervous systems, and whether all types of neural precursor cells derived from different cell origins can be immortalized and differentiated into a specific neuronal population in the said conditions. The embryonic neural tissues for neural culture have not been fully characterized. They contain very diverse cell types including multipotent progenitor cells, restricted neuronal progenitor, and restricted glial progenitor cells (see p. 385, the section of Cell lines derived by oncogene expression, Gottlieb. Annu. Rev. Neurosci. 2002. 25: 381-407). Therefore, each type of cells can be potentially immortalized with oncogenes and the integration of the oncogenes is random, suggesting the phenotypes of each cell type after transformed with oncogenes are different from each other. The instant specification has not disclosed any

information being enabled for immortalized neural precursor cells to be fully differentiated into functionally active differentiated neurons in a functionally related region or mitotic environment as broadly claimed, which also includes the in vivo condition, regardless in the same or different species. Applicant may be enabled for differentiating immortalized Raphe neural cells into neural cells with 5-HT positive characteristics in the presence of growth factor or chick embryo extract in vitro. However, Applicant has not disclosed any information being enabled under in vivo conditions. In addition, Applicant has not provided enough guidance of whether any immortalized neural precursor cells can be fully differentiated into fully differentiated active neurons which including the expression of specific neuronal markers, synaptic markers and regulating synaptic transmission. It would require more undue experimentation to first characterize neural cell derived from embryonic neural tissue and further characterize the function of differentiated immortalized neural cells while a person of skill in the art at the time uses the invention.

11. The instant specification also fails to disclose what the safety feature genes are and how they can be constitutively activated or deactivated to regulate the cell survival or death when they are transformed into undifferentiated nerve cells. Applicant fails to provide enough guidance of whether the immortalized neural cell lines transformed with a safety feature gene can induce apoptosis or remove the effect of the immortalizing agent as broadly claimed. Although it has been claimed that immortalized neural cell lines used in neural transplantation in rats have not shown any tumorgenicity, Eibl et al. teach that neural transplants with transformation of SV40T are able to induce

neuroectodermal tumor in an animal model (see p. 556, abstract, Eibl et al. Am. J. Pathol. 1994. 144: 556-564). Therefore, it is controversial whether SV40T can induce tumorgenicity and whether the immortalized neural cell lines can be transformed with a safety feature gene to deactivate the turmorgenicity or activate apoptosis. Applicant has not provided sufficient guidance to enable one of ordinary skill in the art to make and use the claimed a method to transform a safety feature gene into immortalized neural cells and subsequently to use to regulate the survival or death of immortalized neural cells. Without such guidance, the method and use of the immortalized neural cells transformed with a safety feature gene is unpredictable and the undue experimentation is required to those skilled in the art while using or making the invention.

12. Thus, in view of the necessity of experimentation, the limited working examples, the unpredictability of the art, and the lack of sufficient guidance in the specification, it would require undue experimentation to practice the claimed invention.

13. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

14. Claims 1-18 and 20-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has not defined the characteristics of a "fully differentiated active neural cells"; the artisan would be unable to determine at what point a "fully differentiated active" cell had been produce.

15. Claims 1-18 and 20-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has not defined "homologuses and analogous thereof". Tell them that they haven't set forth any limitations so that the artisan would know which molecules would be considered to be homologues or analogues and which would not.

16. Claims 4-18 and 20-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has not specified characteristics of a "mitotic environment".

17. The term "homogenous" in claim 17, 18 and 20-23 is a relative term which renders the claim indefinite. The term "homogenous" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The neural cells derived from embryonic neural tissue contain diverse cell types which render the cells heterogenous. In addition, it has been shown that the immortalized neural precursor cells transformed with SV40T can be differentiated differently (see p. 601 abstract, Redies et al. J. Neurosci. Res. 1991 Dec; 30: 601-15). Since the population can't be entirely homogeneous, it is not sure what "homogeneous" recited by Applicant means.

18. The term "functionally related" in claim 3-18 and 20-23 is a relative term which renders the claim indefinite. The term " functionally related " is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Applicant has not defined the term of "functionally related".

19. Claim 19 provides for the use of a nerve cell-line, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim Rejections - 35 USC § 101

Claim 19 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd.* v. *Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Obviousness-Type Non-Statutory Double Patenting

20. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory

obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., In re Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

21. Claims 1-19 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-10 of U.S. Patent No. 6, 602,708 ('708). Although the conflicting claims are not identical, they are not patentably distinct from each other because the method for producing large population of neural cells by enhancing the replication of undifferentiated neural or neural precursor/stem cells using an immortalizing agent SV40T in this instant case is the same in view of producing a homogenous population of neural cells by enhancing the replication of undifferentiated neural cells with an immortalizing oncogene as recited in the claims 1-10 of the '708. While the language is not identical, the claims of the instant application and the '708 encompass the same scope of inventions. The claimed method in the instant application is the same as the method in the '585 in view of immortalizing neural, neural precursor or neural stem cells with a temperature sensitive oncogene SV40T, differentiating immortalized neural cells by exposing said cells with cells from the same regions or

growth factors, and transfecting the said neural cell lines with a gene to regulate the survival and death of the said differentiated cells. Thus the instant application and the '708 claim the same and non-distinct inventions of the method for producing large population of neural cells by immortalizing neural/neural precursor cells with SV40T and the method of differentiating immortalized neural cells and regulating the differentiated neural cells.

22. Claims 1-23 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-8, 14, 15, 19-22 of U.S. Patent No. 6, 197, 585 ('585). Although the conflicting claims are not identical, they are not patentably distinct from each other because the method for producing large populations of neural cells by enhancing the replication of undifferentiated neural or neural precursor cells using an immortalizing agent such as SV40T in this instant application is the same in view of immortalizing a human undifferentiated precursor neural cells using SV40T antigen as recited in the claims 1-8, 14, 15, 19-22 of the '585. While the language is not identical, the claims of the instant application and the '585 encompass the same scope of inventions. The claimed method in the instant application is the same as the method of the '585 in view of immortalizing neural cells with a temperature sensitive oncogene SV40T, differentiating immortalized neural or neural precursor cells by exposing said cells with cells from the same regions or growth factors, and transfecting the said neural cell lines with a gene to regulate the survival and death of the said differentiated cells. In addition, the claimed cell lines in the instant application also encompass the human

neural cell lines. Thus the instant and the '585 claim the same and non-distinct inventions of the method for producing large population of neural cells by immortalizing neural/neural precursor cells with SV40T and the method of differentiating immortalized neural cells and regulating the differentiated neural cells.

Claim Rejections - 35 USC § 102

23. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

24. Claims 1-17 and 20-23 are rejected under 35 U.S.C. 102 (b) as being anticipated by Renfranz et al. (Cell. 1991 Aug 33; 66: 713-29).

Renfranz et al. teach a method of immortalizing hippocampal neurons by transforming undifferentiated neural precursor cells with SV40T and regulating the differentiation of the immortalized neural cells with different temperature and environment cues, such as implanting immortalized neural cells in the rat brain, which meeting the limitation of the instant claims. Renfranz et al. also teach the cell lines derived from the method mentioned above. In addition, these immortalized neural cell lines were implanted into postnatal cerebellum that contains a mitotic environment including growth factors (see pages 725 and 726, primary cultures and establishment of cell lines, and implants), which meeting the

limitation of the claims. Therefore, Claims 1-17 and 20-23 are anticipated by Renfranz et al..

Claim Rejections - 35 USC § 103

25. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

26. Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Renfranz et al. (Cell. 1991 Aug 33; 66: 713-29) in view of Eibl et al (Am J. Pathol. 1994. 144: 556-564).

27. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Renfranz et al. teach as set forth above but fail to teach to further transform the undifferentiated nerve cells with a safety feature gene to regulate the survival and death of the cell lines and their use in study of apoptosis.

Eibl et al teach that the neural transplant transformed with SV40Tcan induce tumorgenicity (see abstract) including Choroid plexus papillomas,

retinoblastoma and tumors of pineal gland (see p. 557, the second paragraph). Eibl et al. further teach that neural transplant transformed with oncogenes can be used to study in vivo effects of oncogenes on the brain See page 556, the second paragraph).

Thus, it would have been obvious for one of ordinary skill in the art at the time of the instant invention was made to combine the teachings of Renfranz et al. and Eibl et al to immortalize neural cell lines and further transform a safety feature gene to regulate the survival and death of immortalized neural cell lines to avoid the bad effects of immortalizing agent. The person of ordinary skill in the art would have been motivated to make those modifications because it has been shown that SV40T can potentially induce tumorgenicity. One of ordinary skill in the art would have expected to avoid the tumorgenic effects of SV40T by transforming a gene that can regulate the cell survival and death of immortalized neural cells while immortalizing neural precursor cells or differentiating the immortalized neural cells.

Conclusion

NO CLAIM IS ALLOWED.

28. Any inquiry of a general nature or relating to the status of this general application should be directed to the Group receptionist whose telephone number is (571) 272-1600.

29. Papers relating to this application may be submitted to Technology Center 1600, Group 1649 by facsimile transmission. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). Should applicant wish to FAX a response, the current FAX number for Group 1600 is (571) 273-8300.

30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chang-Yu Wang, Ph.D. whose telephone number is (571) 272-4521. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Andres, Ph.D., can be reached at (571) 272-0867.

31. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CYW
January 9, 2006

JANET L. ANDRES
SUPERVISORY PATENT EXAMINER